

sac. This sac is soon formed, and the ova are deposited in its interior. The embryos are rapidly developed, and their escape from the sac appears to cause the death of the female; at least, Mr. Agassiz has never met with females after their embryos have escaped. The embryos at the moment of issuing from the sac have a triangular outline, their body diminishing rapidly towards the posterior extremity. The development of these embryos presents an example of the most simple evolution observed among the Polychætic Annelides.—*Journ. Bost. Soc. Nat. Hist.* viii. p. 392.

*Note on the Reproduction of the Larvæ of Insects.*

By PROFESSOR NICOLAS WAGNER, of Kasan.

Professor N. Wagner has discovered a fact in the natural history of insects which at first sight appears incredible; but, as it is supported by preparations, the inspection of which by Prof. de Filippi completely convinced him of the truth of Prof. Wagner's observations, a short notice of the singular results arrived at by the latter cannot but be acceptable to our readers.

In June 1861 Prof. Wagner found, under the bark of a dead elm in the vicinity of Kasan, some whitish apodal worms, the organization of which proved them to be larvæ of insects. Each of these larvæ was filled with smaller larvæ. This was nothing remarkable, as cases of parasitism are well known to be exceedingly frequent among insects. But Prof. Wagner was justly struck by the fact that the included larvæ were perfectly identical, even to the smallest details, with the enveloping larvæ. By this identity he was led to assume that the included larvæ represented a second generation produced by the enveloping larvæ. This would therefore be a case of alternation of generations even more surprising than that of the Aphides.

Improbable as this interpretation may appear at the first glance, it has several circumstances in its favour. Amongst these the principal are the following:—

1. It seems impossible to assume that a parasitic larva can present an organization perfectly identical with that of the organism which nourishes it.

2. The parasites which deposit their eggs in a single insect, deposit the whole at once, and these eggs are simultaneously developed. But Prof. Wagner found in one and the same enveloping larva included larvæ presenting the most various phases of development.

3. Parasitism is an accidental phenomenon, whilst all the larvæ observed presented included larvæ at a certain degree of development.

4. The size of the eggs of a given species is constant, whilst the reproductive bodies which here play the part of eggs exhibit very considerable variations of size.

5. In the interior of the larvæ of the second generation a third generation is produced, precisely similar to the first two.

Professor Wagner has observed three other species of the same genus, all presenting this singular mode of reproduction. The perfect insects are still unknown. From the appearance of the larvæ, they seem to belong to the order Diptera.—*Siebold und Kolliker's Zeitschrift*, 1863, p. 544.